Management Recommendations for Construction Projects Affecting Missouri **Wetlands**

MISSOURI DEPARTMENT OF CONSERVATION

Introduction

Wetlands are transitional areas between aquatic and terrestrial habitats in which the soil is usually saturated. This water-inundated state can be permanent or temporary and at least periodically supports vegetation adapted to saturated soils. There are several habitat types that fall under the heading of wetlands, such as hardwood bottomlands, swamps, bogs, fens, and marshes. In Missouri, wetlands generally are associated with rivers and streams but also can be associated with spring and seep areas. Functionally, wetlands have the ability to filter pollutants, recharge and stabilize aquifers, moderate flood flows, and serve as sediment retention areas.

The loss of more than half of North American wetlands as a result of past land-use decisions has led to federal and state legislation to prevent further loss or degradation of wetlands. In Missouri, the loss of wetlands has far exceeded that of the national average. Projects that potentially could impact jurisdictional wetland areas should be reviewed to ensure that adverse impacts on wetlands are avoided or minimized where practical.

Access and Staging Area Management Recommendations

Staging areas are those short- or long-term sites within a construction or development area where most equipment and materials are stored. These areas are often accessed frequently; and when fuel and oil are stored here, the potential for runoff and erosion in these areas may be high.

→ Erosion and sediment controls should be installed and maintained to prevent discharge from the site.

→ Staging area for crew, equipment, and materials should be established well away from wetlands or highly erodible soils.

→ Stationary fuel and oil storage containers should remain within a staging area or another confined area to avoid accidental spills into wetlands.

→ Excess concrete and wash water from trucks and other concrete mixing equipment should be disposed of in an area where this material cannot enter wetland areas.

→ If temporary roadways must be built, ensure that roadways are of low gradient with sufficient roadbed and storm water runoff drains and outlets. Containment basins, silt fences, filter strips, etc. should be included for retention of storm water runoff to reduce sediment introduction into natural waterways.

Buffer Zone Management Recommendations

The buffer zone includes all vegetation surrounding the wetland. This area is critical to the health and quality of the wetland environment because it may slow sedimentation and absorb some pollutant runoff, as well as provide wildlife food and habitat. A minimum 100-foot undisturbed vegetative buffer zone should be maintained directly adjacent to the wetland area.

→ Limit clearing of vegetation to that which is absolutely necessary for construction purposes.

→ Heavy equipment use within this buffer zone should be restricted to minimize vegetation destruction and compaction of soils. Flagging or fencing areas that are not to be disturbed is helpful in alerting construction personnel.

→ General application of pesticides, herbicides, or fertilizers within the buffer zone should be prohibited to avoid water contamination due to over-spray or runoff. Fertilizer use or spot application of pesticides and herbicides is acceptable if appropriate non-restricted chemicals are used.

→ All areas disturbed by the project should be revegetated immediately following or concurrent with project implementation. Appropriate native bottomland or riparian trees, shrubs, and grasses should be planted to ensure long-term stability in areas where the soil erosion threat is not critical. Annual non-native grasses such as rye or wheat may be planted in conjunction with native species to provide short-term erosion control. Areas judged to be subject to immediate soil loss due to steep slopes or other factors causing critical erosion conditions may be planted with non-native mixtures to assure rapid establishment and erosion control.

→ Post-construction evaluation of vegetation establishment should be conducted at one month intervals for at least three months after completion of project. Any recommended sediment controls should be inspected at these times. If determined beneficial to soil stability and not adversely impacting site function and/or aesthetics, recommended erosion controls should remain permanent.

Wetland Area Management Recommendations

The functions and values of wetlands are nearly as diverse as the wetlands themselves, but these include water purification, flood protection, and

plant, fish, and wildlife habitat. The following recommendations are designed to avoid impacting the ability of wetland areas to provide such services to the environment.

→ No fill material should be placed within any wetland area, unless approved by the regulatory agencies (e.g., EPA, USCOE, DNR).

→ Proper sequencing of work should be employed to minimize duration of disturbance within the wetland area. For example, trenching for utility lines should be conducted in a continuous operation, involving clearing, installation, backfilling, and soil restoration as the project moves forward.

→ All construction debris, refuse, discarded containers, and any other waste materials should not be stored within the jurisdictional wetland areas. Take care to contain these materials to prevent any accidental introduction into the wetlands as a result of clean-up activities, runoff or flooding, wind, or other natural events.

→ Temporary pile-supported construction trestles, sheet piling, or similar techniques should be used when possible. Equipment modifications also should be adapted, such as low-pressure tires on vehicles, dredge equipment with closable covers, and watertight buckets, to minimize impacts.

→ Erosion and sediment controls appropriate to soil type, water flows, exposure, and other site specific factors should be implemented during all phases of construction.

→ Erosion and sediment controls should be monitored periodically. Clean, repair, and replace controls as necessary.

→ Final revegetation of wetlands using native wetland plant species should be completed in conjunction with the final phase of the project. A monitoring program should be included in the project proposal to ensure successful revegetation efforts.

→ All temporary erosion and sediment controls should be removed (unless removal would cause further disturbance) and disposed of within 30 days after final site stabilization is achieved or after temporary practices are no longer needed.

→ All debris and excess materials should be removed and properly disposed of upon completion of the project.

Information Contacts

For further information regarding regulations for development in wetlands, contact:

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U.S. Army Corps of Engineers
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U.S. Environmental Protection Agency
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Disclaimer

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